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## **Amendments to the Claims:**

This listing of claims replaces all prior versions, and listings, of claims in this application.

1. (Withdrawn) A variable-optical-characteristic optical element characterized by using at least two selected from the group consisting of electrostatic force, electromagnetic force, a piezoelectric effect, magnetostriction, a fluid pressure, a magnetic field, an electromagnetic wave, a temperature change, and a photomechanical effect.

2. (Withdrawn) A variable mirror characterized by using at least two selected from the group consisting of electrostatic force, electromagnetic force, a piezoelectric effect, magnetostriction, a fluid pressure, a magnetic field, an electromagnetic wave, a temperature change, and a photomechanical effect.

- 3. (Withdrawn) A variable-focus lens characterized by using at least two selected from the group consisting of electrostatic force, electromagnetic force, a piezoelectric effect, magnetostriction, a fluid pressure, a magnetic field, an electromagnetic wave, a temperature change, and a photomechanical effect.
- 4. (Withdrawn) A variable-optical-characteristic optical element capable of achieving high-precision optical deflection by combined use of two or more different driving methods to change optical deflection thereof, wherein each driving method is capable of achieving a different optical deflection change.
- 5. (Currently Amended) A variable-focus variable-optical-characteristic optical unit, comprising:

a variable-focus optical element having a fluid portion, and an electrode adjacent to said fluid portion; and

a power source <u>unit</u> and a driving circuit for driving said <del>variable focus optical</del> <del>element</del> <u>variable-optical-characteristic optical unit</u>, wherein:

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said power source <u>unit</u> or driving circuit includes a booster member that <u>is connected</u>
to the power source <u>unit and</u> generates a voltage necessary in said driving circuit, and
said <del>variable-focus optical element</del> <u>variable-optical-characteristic optical unit</u> is
capable of achieving optical deflection.

- 6. (Currently Amended) A variable-focus variable-optical-characteristic optical unit according to claim 5, wherein electrostatic force or piezoelectric effect is used for driving said variable-focus optical element variable-optical-characteristic optical unit.
- 7. (Withdrawn) A variable-optical-characteristic optical element comprising a deformable optical surface and a member for creating a magnetic field, wherein a substrate of said optical surface is made of a magnetostrictive material, and said member is capable of changing an intensity of the magnetic field.
- 8. (Withdrawn) A variable-optical-characteristic mirror that uses a magnetostrictive material and comprising a deformable optical surface.
- 9. (Withdrawn) A variable-optical-characteristic lens comprises a deformable optical surface and a member for creating a magnetic field, wherein a substrate of said optical surface is made of a magnetostrictive material, and said member is capable of changing an intensity of the magnetic field.
- 10. (Withdrawn) A variable-optical-characteristic optical element comprising a deformable optical surface, wherein a transparent member for covering a whole deformable portion thereof is provided near said optical surface.
- 11. (Withdrawn) A variable-optical-characteristic optical element according to claim 10 which is a variable mirror or a unifocus mirror.

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12. (Withdrawn) A variable-optical-characteristic optical element comprising a light source for driving said variable-optical-characteristic optical element, wherein a substance having a photomechanical effect is used for deformation of an optical surface, and optical deflection changes by deformation of the optical surface.

- 13. (Withdrawn) A variable-focus lens comprising a light source for driving said varifocal lens, wherein a substance having a photomechanical effect is used for deformation of an optical surface, and optical deflection changes by deformation of the optical surface.
- 14. (Withdrawn) A variable mirror characterized by using a photomechanical effect.
- 15. (Withdrawn) A variable-optical-characteristic optical element characterized by having at least two different kinds of light sources and using a photomechanical effect.
- 16. (Withdrawn) An optical apparatus comprising a variable-optical —characteristic optical element, wherein said variable-optical-characteristic optical element comprises an optical surface, and a space that faces a whole portion thereof that is to be deformed is closed up with a transparent member and a mechanical member, which is characterized in that the variable-optical-characteristic optical element is a variable mirror.
- 17. (Withdrawn) An optical-apparatus comprising a variable-optical-characteristic optical element, wherein said variable-optical-characteristic optical element comprises an optical surface, and a space that faces a whole portion thereof that is to be deformed is airtightly closed up with a transparent member and a mechanical member, which is characterized in that the variable-optical-characteristic optical element is a variable mirror.
- 18. (Withdrawn) An optical apparatus according to claim 16, which is characterized by using an air-permeable mechanical member or transparent member.
- 19. (Canceled)

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20. (Withdrawn) An optical apparatus according to claim 18, which is characterized in that the variable-optical-characteristic optical element is a variable mirror.

21. (Currently Amended) A variable focus variable-optical-characteristic optical unit having a deformable optical surface, comprising:

a variable-focus element variable-optical-characteristic optical unit having said deformable optical surface; and

a control system for driving said variable focus optical element variable-optical-characteristic optical unit, wherein said variable-focus optical element variable-optical-characteristic optical unit includes a fluid portion for deforming said deformable optical surface and an electrode adjacent to said fluid portion, and said control system includes a booster member that is connected to a power source, and for applying a voltage necessary for driving said variable-focus optical element variable-optical-characteristic optical unit.

- 22. (Cùrrently Amended) The variable-focus variable-optical-characteristic optical unit according to claim 21, which is a varifocal lens or a variable mirror.
- 23. (Canceled)
- 24. (Currently Amended) An imaging system, comprising an image pickup device and an imaging optical system for which a variable focus optical element variable-optical-characteristic optical unit as recited in any one of claims 5, 21, and 22 is used.
- 25. (Currently Amended) An imaging system, comprising a variable-focus optical element,
- a power source <u>unit</u> and a driving circuit for driving said variable-focus optical element,

a computing unit, an image pickup device, and

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an imaging optical system, wherein said power source <u>unit</u> or said driving circuit includes a booster member <u>that</u> is <u>connected</u> to a <u>power source</u>, and that generates a voltage necessary in said driving circuit,

said variable-focus optical element is capable of achieving optical deflection, said computing unit examines a high-frequency component of each image picked up while being defocused, and the position where the high-frequency component reaches a maximum is determined to be an in-focus position, and

said variable-focus optical element is used for autofocusing of said imaging optical system.

26. (Currently Amended) A imaging system, comprising

a variable-focus optical element having a deformable optical surface,

a control system for driving said variable-focus optical element,

a computing unit,

an image pickup device, and

an imaging optical system, wherein said control system includes a booster member that is connected to a power source, and operable to for applying a voltage necessary for driving said variable-focus optical element,

said computing unit examines a high-frequency component of each image picked up while being defocused, and the position where the high-frequency component reaches a maximum is determined to be an in-focus position, and

said variable-focus optical element is used for autofocusing of said imaging optical system.

- 27. (Withdrawn) The variable-optical-characteristic optical element according to claim 10 or 11, wherein said transparent member is a lens.
- 28. (Withdrawn) An imaging system, comprising an imaging optical system including a variable-optical-characteristic optical element as recited in claim 10 or 11.

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29. (Withdrawn) An optical apparatus, comprising a variable-optical-characteristic optical element having a deformable optical surface, wherein a space including a whole deformable portion is closed up with a transparent member and a mechanical member.

- 30. (Withdrawn) An optical apparatus, comprising a variable-optical-characteristic optical element having a deformable optical surface, wherein a space including a whole deformable portion is airtightly closed up with a transparent member and a mechanical member.
- 31. (Withdrawn) The optical apparatus according to any one of claims 16, 17 and 30, wherein said transparent member has a lens action.
- 32. (Withdrawn) The imaging system according to claim 16 or 17, which comprises an image pickup device and an imaging optical system including said variable-optical-characteristic optical element, wherein autofocusing or zooming is carried out by deformation of said optical surface.
- 33. (Withdrawn) The imaging system according to any one of claims 16, 17 and 30, which comprises an image pickup device and an imaging optical system including said variable-optical-characteristic optical element, wherein a contrast type of autofocusing is carried out by deformation of said optical surface.
- 34. (Withdrawn) The optical apparatus according to any one of claims 16, 17 or 30, which comprises a display device.
- 35. (Withdrawn) The optical apparatus according to any one of claims 16, 17 or 30, which comprises a lookup table for deforming the optical surface of said variable-optical-characteristic optical element.

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36. (Withdrawn) The optical apparatus according to any one of claims 16, 17 or 30, which comprises a plurality of said variable-optical-characteristic optical elements, wherein zooming is carried out.

37. (Withdrawn) The optical apparatus according to any one of claims 16, 17 or 30, which is a cellular phone.

38.-39. (Canceled)

- 40. (Currently Amended) A cellular phone having said imaging system as recited in any one of claims 24, 25, and 26.
- 41. (New) A cellular phone having said imaging system as recited in claims 25 or 26.